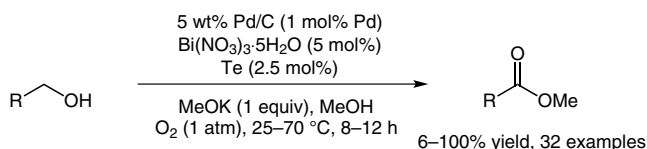


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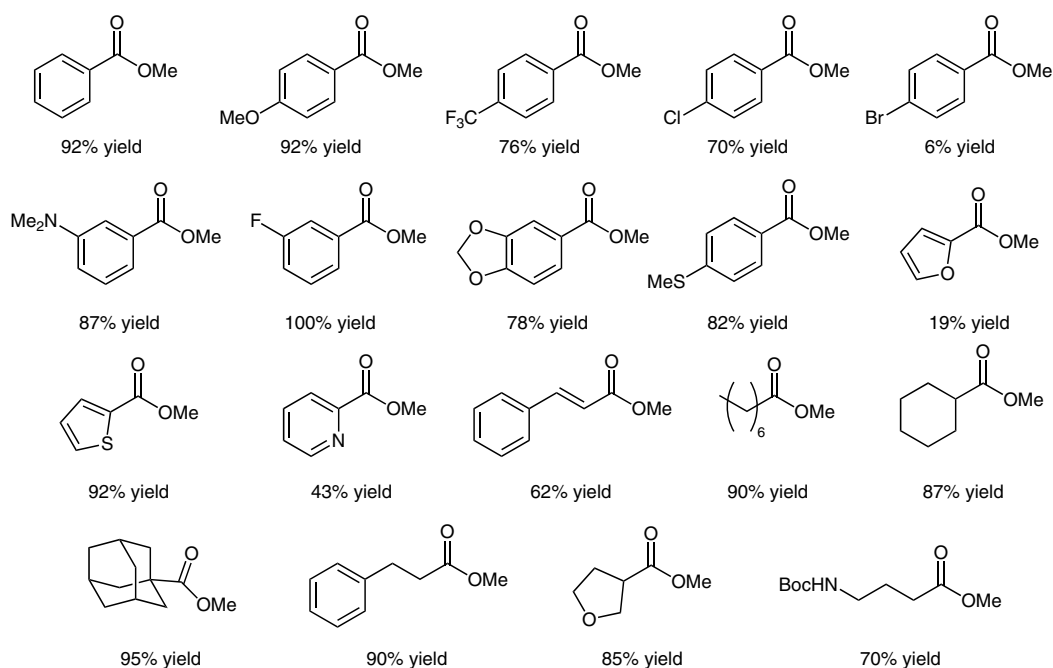
Aerobic Oxidation of Diverse Primary Alcohols to Methyl Esters with a Readily Accessible Heterogeneous Pd/Bi/Te Catalyst

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Oxidative Esterification of Primary Alcohols with a Pd/Bi/Te Catalyst



Typical results:



Significance: Palladium on activated charcoal (Pd/C, 5 wt%, purchased from Sigma-Aldrich) in combination with $\text{Bi(NO}_3)_3 \cdot 5\text{H}_2\text{O}$ and Te catalyzed the aerobic oxidative esterification of primary alcohols to give the corresponding methyl esters in 6–100% yield (32 examples, eq. 1).

Comment: In the absence of $\text{Bi(NO}_3)_3 \cdot 5\text{H}_2\text{O}$ and Te, the oxidative esterification of 1-octanol gave methyl octanoate in 16% yield. The catalytic activity of palladium on activated charcoal was superior to that of palladium on carbon and alumina (purchased from Sigma-Aldrich).